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Master's Programme in Economics

Does local unemployment influence voting behavior?

Evidence from Helsinki

Johannes Vanhanen

Master's thesis
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Author Johannes Vanhanen

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Abstract

This thesis examines whether local unemployment influences voting behaviour, focusing on voter turnout and party support in Helsinki between 2011 and 2023. By combining spatial data on unemployment, income, and education levels with voting district level election results, the impacts of local differences in demographic characteristics on political participation can be accurately studied. The connection between the variables of interest is illustrated in descriptive figures as well as using several OLS regression models. The empirical work is supported by a literature review section, where the connection between socioeconomic factors, economic uncertainty, and turnout is established.

Across all turnout models, I find a strong and robust negative association between unemployment and voter turnout: districts with higher unemployment exhibit consistently lower participation, even after controlling for income and education, as well as election and district fixed effects. Party-level results are weaker and heterogenous, and no strong linkages arise between party-level support and unemployment, except for Helsinki's largest party, Kokoomus. The study is observational and cannot establish causal effects, since individual-level behaviour and exogenous shocks are not observed.

The thesis concludes with a discussion on policy implications, such as a need for civic engagement initiatives in poorly participating areas, and a consideration of avenues for future research.

Keywords Urban economics, political participation, residential segregation

JEL Codes E24, D63, D72

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Tiivistelmä

Tässä tutkielmassa tarkastelen, vaikuttaako paikallinen työttömyys äänestyskäyttäytymiseen. Erityinen huomio kohdistuu äänestysaktiivisuuteen ja puolueiden kannatukseen Helsingin äänestysalueilla vuosina 2011–2023. Yhdistämällä paikkatietoaineistoa työttömyydestä, tuloista ja koulutustasosta äänestysalueiden vaalituloksiin pystyn tutkimaan tarkasti, miten paikalliset demografiset erot heijastuvat poliittiseen osallistumiseen. Muuttujien välisiä yhteyksiä havainnollistetaan sekä kuvaajien että lineaariregressiomallien avulla. Empiiristä analyysiä tukee kirjallisuuskatsaus, jossa tunnistetaan sosioekonomisten tekijöiden ja äänestysaktiivisuuden välinen yhteys. Kirjallisuuskatsauksessa käsitellään useita tutkimuksia, jotka löytävät kausaalisuhteen taloudellisen epävarmuuden ja äänestyskäyttäytymisen välillä.

Kaikissa tutkielman äänestysaktiivisuutta tutkivissa empiirisissä malleissa havaitaan vahva ja systemaattinen negatiivinen yhteys työttömyyden ja äänestysaktiivisuuden välillä: korkeamman työttömyyden alueilla äänestysprosentti on kategorisesti matalampi myös tulo-, koulutus- sekä vaali- ja aluetason kiinteiden vaikutusten kontrolloinnin jälkeen. Puoluekohtaiset tulokset ovat heikompia ja heterogeenisiä, eikä työttömyydellä ole selkeää yhteyttä puolueiden kannatuksen muutoksiin muiden kuin Kokoomuksen kohdalla. Tutkimus perustuu aluetason aineistoon eikä mahdollista syy-seuraussuhteiden osoittamista, koska yksilötason käyttäytymistä tai ulkoisia taloudellisia shokkeja ei voida hyödyntää analyysissä.

Tutkielma päättyy pohdintaan mahdollisista politiikkatoimista, kuten osallistumista tukevien toimenpiteiden kohdentaminen alhaisen äänestysaktiivisuuden alueille, sekä ehdotuksiin lisätutkimuksesta aiheen parissa.

Avainsanat Kaupunkitaloustiede, äänestyskäyttäytyminen, alueellinen eriarvoisuus, työttömyys

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Preface and acknowledgements

I want to thank Professor Tuukka Saarimaa for their good advice, patience and guidance.

I also want to thank my partner 1000 times for their support.

Tapiola, 16 December 2025

1 Introduction

The link between a country's economic performance and election outcomes has been established in both political science and economics (e.g. Blais et al., 2004). In most democratic countries, the economy's performance is a key political theme, and since the state of the economy directly impacts both the livelihood of citizens and the broader health of the nation, the relevance of the economy to politics cannot be understated. Political scientists have suggested several theories on why people vote at all (e.g. Teorell 2006): some argue that individuals are conditioned to vote by their environment, while others posit that the benefits of voting (i.e. the ability to influence decision-making) outweigh the costs involved, such as gathering information on the election and candidates as well as the act of voting itself.

In democratic nations, levels of political activity are not level across the population: on average, wealthier and better educated citizens are more active voters (Nadeau et al., 2019). This variation in activity is not unproblematic, since it poses a serious threat to the representativeness of democratic institutions. For example, if highly educated people are twice as likely to vote as those with a vocational degree, then candidates who appeal to the highly educated will be overrepresented in parliament relative to the population. This imbalance may impact policy decisions and subsequently contribute to further erosion.

In the literature, the link between depressed economic outcomes and political participation has been studied from multiple angles, with most research focusing on the United States and Europe. Most studies look at data on area-level differences or differences between demographic groups, but a handful of studies have also collected individual-level data sets. The literature is explored in depth in section 2.

In this thesis, I study one potential source of variation in voter activity, unemployment. Unemployment has direct economic consequences for both the individual and the state – in welfare states, unemployed people receive public financial support, which puts a strain on the country's public economy. For the individual, unemployment typically means decreased household income and increased financial uncertainty. Further, unemployment has negative psychological impacts, causing stress and reduced self-esteem (Liem & Liem, 1988). In this study, the relationship of interest is that between unemployment and voting behavior. My empirical analysis focuses on Helsinki, Finland, leveraging a 13-year demographic data set and results from seven elections.

Finland, similar to several EU countries, has experienced sluggish economic growth in past years. The country's economic woes have been exasperated by the Russian invasion of Ukraine, since Russia has historically been a key trading partner. In conjunction with geopolitical uncertainty, the increase in interest rates, while modest on a historical scale, has depressed investment levels in an economy that had grown used to near-zero interest rates. Since 2022, Finland's unemployment rate has grown by roughly 50%, reaching 9,3% in August 2025. With the next parliamentary election only one and a half years away, studying the potential connection between unemployment and voter behavior is undoubtedly a timely undertaking.

1.1 Research objectives

As mentioned earlier, unequal participation in democratic decision-making drives disproportionate representation and distorts outcomes from what we might expect to see if all eligible people voted. While one might argue that refusal to participate should be treated as an equally justified political act, the adverse effects of abstaining on the individual exist, regardless of whether they themselves acknowledge them. Though not a perfect parallel, it is undeniable that women's suffrage and equal voting rights contributed to improvements in women's rights, both on an absolute scale and relative to men. Similarly, groups that vote consistently less than others among society are at a disadvantage when it comes to improving their station in society through political decision-making.

While this thesis is, by nature, a research paper rather than a policy document, the research questions under investigation may yield fruit for future decision-making. Our primary goal is to quantify the correlation between unemployment and reduced political participation rates. While I will attempt to establish a causal connection, even strong correlation has policy implications, since it encourages us to further explore the connection between socioeconomic status and democratic institutions. These results are impactful on a general level: they do not directly benefit certain parties at the expense of others.

Our secondary goal is to look at *who* people vote for, since this information may reveal something about how voters assign responsibility of their local economic conditions to decisionmakers. Further, the differences between parties will be quantified – the impact of economic performance on a party's popularity likely depends on a host of factors, such as how they position themselves or how voters perceive their competence in relation to the economy. We should, however, be careful to make definitive claims, since our

approach and data will serve as our main limitation. The data-related constraints are also a main point of discussion in this thesis.

Lastly, I aim to reveal something about participation in Helsinki specifically. While the income and wealth distribution in Finland is relatively flat on a global scale, Helsinki, similar to a plethora of cities across the world, has more affluent and less wealthy areas. Since city politicians do not originate from specific districts, some areas may gain disproportionate influence if they are populated by more active voters relative to other neighborhoods. If significant differences in both economic outcomes and political participation are discovered, it encourages us to consider whether the relationship between them might be self-enforcing. While one should not expect to find undeniable evidence of the claim, our goal is to encourage further discussions and exploration into the multifaceted, long-term relationship between the two variables.

1.2 Thesis structure

This thesis is structured as follows: first, I explore the literature on the effects of unemployment on political participation, as well as the implications of imbalanced representativeness on local communities. I distill these findings to a handful of conclusions, which in conjunction with our empirical sections, contribute to the final discussions. In sections 3-5, I study the relationship between unemployment and voter behavior empirically, producing descriptive results about Helsinki's voting districts. While the literature review section includes analysis of studies with access to individual-level data, the datasets available for Helsinki encourage us to look at the neighborhood level. I take a look at both overall turnout and how party-level support changes at the local level. In addition to our descriptive section, I also run a series of regressions to potentially identify a causal connection between our variables of interest. Following the empirical sections, I consider the implications of our results, as well as the constraints that our data and approach places on interpreting them. I conclude with a discussion on the relevance of these findings as well as potential avenues for further research.

2 Literature review

In this section, I look at how the connection between economic uncertainty and voter behavior has been explored in the literature. As established in the introduction, political participation can be approached from multiple angles, and unequal participation can influence society in many ways. The literature review is split into three subsections – imbalanced representation, economic uncertainty, and political trust. Each dimension allows us to establish the relevance of this research and ensures a balanced approach to the literature. The focus is on economics papers, but support our analysis with studies in political science as well, since the two fields overlap heavily on this issue. At the end of this section, I condense our findings into a handful of broad observations and take-aways.

2.1. Imbalanced representation

Demographic differences in political participation rates are apparent in voting statistics. In the 2023 Finnish parliamentary election, women were more likely to vote than men by 2 percentage points, and those in the highest income quintile dwarfed the lowest-earning group by nearly 30 percentage points (StatFin, 2023). In other countries, the magnitude of the disparities differ, but in general, studies find that higher wealth corresponds to increased voter turnout (Nadeau et al., 2019). Nonetheless, identifying a causal relationship between the potential root causes of voting and turnout is challenging. In studies which consider the importance of education, for example, ideal data sets that span several decades are scarce. In general, the many motivations for voting are likely to overlap. Regardless of causality, the result of imbalanced representation persists from one election to the next.

While it is easy to state that representativeness is important to democratic institutions, it is important to quantify this assertion. Harjunen et al. (2023) illustrate the tangible impacts of imbalanced representation by studying the "supply-side" of elections, local politicians. In Finnish municipal elections, all candidates within one municipality are on the same ballot. Nonetheless, voters generally favor local candidates, which may occur due to a sense of community or hope that the candidate is personally aware of the neighborhood's contemporary affairs. This home bias is subsequently reflected in the composition of municipal councils. By using geographic data on municipalities and candidates, the researchers show that richer, higher-educated neighborhoods have more representation in local government than poorer, low-educated areas. The tendency of voters to "vote local", combined with

demographic differences in turnout, lead to disproportionate representation of different areas.

Harjunen et al. (2023) also look at how local representation affects the availability of public goods by analyzing school closures. The researchers find that closures are less likely to impact neighborhoods which are represented in local institutions – when a candidate living near a school is randomly selected[1], the likelihood of closure decreases by half. This may be due to the fact that politicians have an incentive to protect their core electoral base. Further, the authors find that the connection between local representativeness and public good provision may increase residential segregation, with richer families moving away from areas with reduced public amenities. Those with the ability to live in better serviced areas will choose to do so, while groups which have a greater need for support and representation are left behind. This introduces a potential feedback loop where neighborhoods which lose public services lose valuable active voters, and are subsequently more poorly represented in local politics, which leaves them vulnerable to further loss of services.

The results of Harjunen et al.'s (2023) study quantify the potential consequences of poor voter turnout,and help establish the relationship between the variables of interest in my own empirical work, namely unemployment and turnout. If negative economic shocks lead to a persistent decrease in turnout, the potential damage of geographically concentrated unemployment shocks are amplified.

2.2. Economic uncertainty and voting

Next, I review studies which have sought to quantify how changes in economic wellbeing influence voter behavior. Past studies have looked at variables such as household income and property value as an indicator of the economic standing of voters.

In a recent study, Upward and Wright (2024) look at the impacts of income shocks on political participation. The researchers utilize a 25-year panel data set comprising of 5000 British households, surveyed annually. Households are asked questions regarding their finances, political views, and other relevant demographic information. The authors employ a difference-in-differences approach to evaluate how job loss influences political behavior; does

[1] If two candidates receive the same number of votes, the choice between the two is randomized.

unemployment reduce support for the incumbent party, and how might it influence turnout?

Upward & Wright (2024) find that unemployment reduces turnout by roughly 2 – 3 percentage points. Further, job loss has a statistically significant negative effect on turnout several years after job loss, suggesting that unemployment can have an extended, disheartening effect on voters. The researchers also consider the potential impact unemployment might have on the whole household. Though both parties may not be personally affected by job loss itself, the economic consequences of unemployment might spill over and influence the political behavior of spouses as well as the unemployed themselves. However, the authors find no empirical evidence to support this hypothesis.

The finding that the effects of unemployment are isolated is somewhat surprising, since it is reasonable to assume that the shared finances and decisions of households would be reflected in aligned outcomes on political behavior. Given that the existence of (general) neighborhood effects has been established in economic literature (e.g. Damm & Dustmann, 2014 and Chyn & Haggag, 2019), we might expect a household effect to arise as well.

McCartney (2021) studies the impact of economic shocks on political participation from a different angle, using house prices as a measure of household wealth. McCartney studies property values and election outcomes in North Carolina during the 2008, 2010 and 2012 federal elections, which coincided with the global financial crisis and its aftermath. The data set encompasses over three million voters, the majority of whom are homeowners. Thus, changes in property values are relevant for the majority of voters in the sample.

Mirroring Upward & Wright (2024), McCartney (2021) finds that decreases in household wealth reduce political participation rates: a 10% decrease in property values results in a 1.2 percentage point decrease in the likelihood of participation, i.e. voting. This result is in contrast with the "angry voter hypothesis" established in political science literature (see Kern et al., 2015), which posits that experienced economic hardship motivates voters to speak out for change. McCartney's findings suggest that the uncertainty associated with economic struggles leads to a shift in priorities from participation to survival or reduces faith in elected officials. In line with Upward & Wright, the decrease in property values only impacted the participation of homeowners, with renters remaining unaffected. This illustrates the focus voters have on their personal circumstances. McCartney argues that the imbalanced turnout rates lead to a situation where those most affected by the financial

crisis are under-represented in government, which is then reflected in policy measures which do not support disadvantaged groups. Though the under-represented group is different than in Harjunen et al.'s study, McCartney's study makes similar contributions to the literature on the consequences of skewed representation.

In his master's thesis, Haapanen (2024) looks at the impacts of local housing construction on voter behavior. Though nearby housing construction does not have a similar direct economic impact as job loss, it is likely reflected in property values. Haapanen uses geospatial data on buildings and voting districts to assess whether construction boosts or depresses participation. Though his results are not statistically significant, there is some indication that construction, particularly apartment building projects, reduce voter turnout. This finding is in line with McCartney's (2021) work, with voters perhaps losing faith in their ability to influence their environment. While together the results are in contrast with the angry voter hypothesis, it is interesting that a mere reduction in property values has a disheartening effect: while the effects of nearby housing construction are permanent, cyclical changes in property values are more fluid.

In a recent study, Hirvonen, Schafer and Tukiainen (2024) investigate how unconditional basic income can improve political participation rates. The authors utilize data on a large-scale government-led basic income experiment conducted in Finland between 2017 and 2019. A random sample of unemployed Finns received basic income in lieu of traditional unemployment benefits, allowing researchers to study the experiment as a random control trial. Basic income, unlike the unemployment benefits, were paid to everyone in the treatment group for the entire two-year period, regardless of whether they became employed again during the experiment.

Hirvonen et al. (2024) first show that unemployment benefit recipients are less educated and less wealthy than average citizens. Within this group, the authors outline three groups based on their voting behavior: those who always vote, those who never vote, and marginal voters. Next, they estimate the effect of treatment on individuals voting behavior in municipal elections based on self-reported voting data. The researchers find that basic income has a statistically and economically significant effect on the voting behavior of marginal voters, with basic income increasing turnout by 6,5 percentage points. The authors find no economically significant effect on low and high propensity voters, suggesting that basic income does not function as the sole motivator in voting decisions. Nonetheless, the finding that basic income increases turnout among marginal voters has important implications for policy decisions aimed at reducing turnout inequality and improving the

representativeness of public institutions. For this thesis, Hirvonen et al.'s findings regarding the demographic composition of the unemployed helps underscore the importance of studying the connection between local unemployment and political behavior.

2.3. Trust in democratic decision-making

Thus far, we have established that economic shocks often decrease voter turnout, and that disproportionate representation may amplify this effect over time. Next, I briefly consider the political implications of these findings.

During the 2010's and 2020's, I have seen a global increase in the prevalence and popularity of populist rhetoric, best exemplified by Donald Trump's two terms as president of the United States. Though the rise of populism, similar to an individual's decision to vote, stems from several sources, a credible cause is economic hardship. Guiso et al. (2024) study what role economic shocks may have played in the rise of populist movements in Europe. They posit that economic uncertainty reduces voters' faith in the system and established parties, encouraging them to look to new (populist) movements. The researchers outline a model in which the decision to vote is separate from the decision on who to vote for, and find that economic insecurity decreases overall turnout, but increases the likelihood of populist support if the individual does decide to vote. The findings on turnout largely mirror the other studies examined, but Guiso et al. expand on the other effects of economic shocks, in that the reduction in participation rates do not impact all parties equally.

Giustozzi and Gangl (2021) study panel data from 23 European democracies as well as the United States to assess how unemployment influences political trust. The authors find significant country-level variation but overall find a negative relationship between unemployment and faith in elected officials. Interestingly, they also find that in welfare states such as Denmark and Sweden, unemployment had a stronger negative impact on political trust. Though the unemployed receive better than average protection from the government, their attitude towards politics changes more harshly than in countries with less generous welfare state provisions. However, the authors argue that the reduction in trust identified in welfare states stems from non-economic factors such as political alienation. Regardless of the channel, however, the stress of unemployment on the political system itself raises interesting questions as to how democratic states can ensure the functioning of their institutions in the long term.

2.4. Takeaways

The literature reviewed in this section contributes to three key findings regarding income shocks, turnout, as well as the consequences of these shocks at the individual-, community-, and system-levels:

1) Political participation rates vary between different demographics, which introduces the risk of imbalanced representation in democratic institutions. This imbalance increases the risk of residential segregation.
2) Economic uncertainty can both increase and decrease political participation rates. Empirical economic studies, however, have more often found that household income/wealth and participation are positively correlated with each other.
3) Economic hardship often has a negative impact on trust in democratic politics and institutions, which increases the threat economic shocks pose to political stability.

These three takeaways will inform our approach to the empirical section of this thesis. Given that a correlation between household income and increased political participation has been established in the literature, our investigation into the connection between unemployment and voter behaviour is justified.

3 Research material and methods

The empirical portion of this thesis is structured around data on parliamentary and municipal elections between the years 2011 and 2023, as well as demographic data from 2010 to 2023. Election data is collected from the Ministry of Justice's information and result service, which offers formatted data on important variables such as turnout and election outcomes by voting district. The demographic data is collected from Statistics Finland's Paavo-database, which features extensive demographic data on all postal code areas in Finland. High-quality data is only available for the post-2010 period, which unfortunately leaves the financial crisis beyond our scope. Nonetheless, a 13-year period allows us to establish trends and compare elections with each other.

3.1. Measures on unemployment

In the demographic data, the unemployment variable states the number of unemployed people in the postal code area. Each resident's employment status is recorded on the last day of the year, and this information is then aggregated at the postal code level. No separation is made between full-time and part-time workers, which introduces some measurement error. Given that elections occur in spring while demographic data reflects the end of the year, for any election, I use the previous year's demographic data. An exception is made, however, for the 2012 municipal elections, which were held in October. For this year, I use demographic data from the end of 2012.

3.2. Information on voting behavior

The Ministry of Justice collects data on election results, as well as turnout, which is further separated by gender. Given the private nature of democratic elections, this information cannot be attributed to specific individuals. Consequently, even if an individual-level demographic data set were available, I would not be able to connect a recently unemployed voter with their decision on who to vote for. Our goal is to estimate whether there are district-level trends or differences in the relationship between unemployment and voting behavior.

3.3. Control variables

The Paavo-dataset includes over 80 different variables, the majority of which are not relevant to this study. The most relevant controls include income and

level of education, but other information such as household size could be used to potentially emulate Upward & Wright (2024) in estimating household effects.

3.4. Building data

Since the demographic data is available at the postal code level, while election data is collected at the voting district level, a third data set must be used to connect the main information. To bring the data sets together, I use data on the locations, postal codes, voting districts of all buildings in Helsinki. This data is openly accessible and collected by the City of Helsinki.

3.5 Methodology

In this thesis, I investigate the connection between local unemployment and voter behavior. In Finland, all voters are automatically registered to vote, and individual-level data on voters is not publicly available. Even in studies which use individual-level data sets (e.g. Hirvonen et al., 2024), the votes themselves are private information. Voters are assigned to voting districts based on their home addresses, and votes are first tallied at the voting district level, regardless of whether the vote is given in advance or on election day. At the voting district level, demographic data is limited, with gender being the only information reported about all eligible voters.

Given that demographic data is unavailable at the voting district level, I turn to data on postal code areas (referred to as zip codes in American English, but official Finnish entities use the term 'postal code'). The data on postal code areas is extensive, and in some regions, voting districts perfectly match postal code areas. However, this is not always the case, as a postal code area can be spread across multiple voting districts, and a voting district can be comprised of several postal code areas. This disconnect is illustrated in figure 1 below:

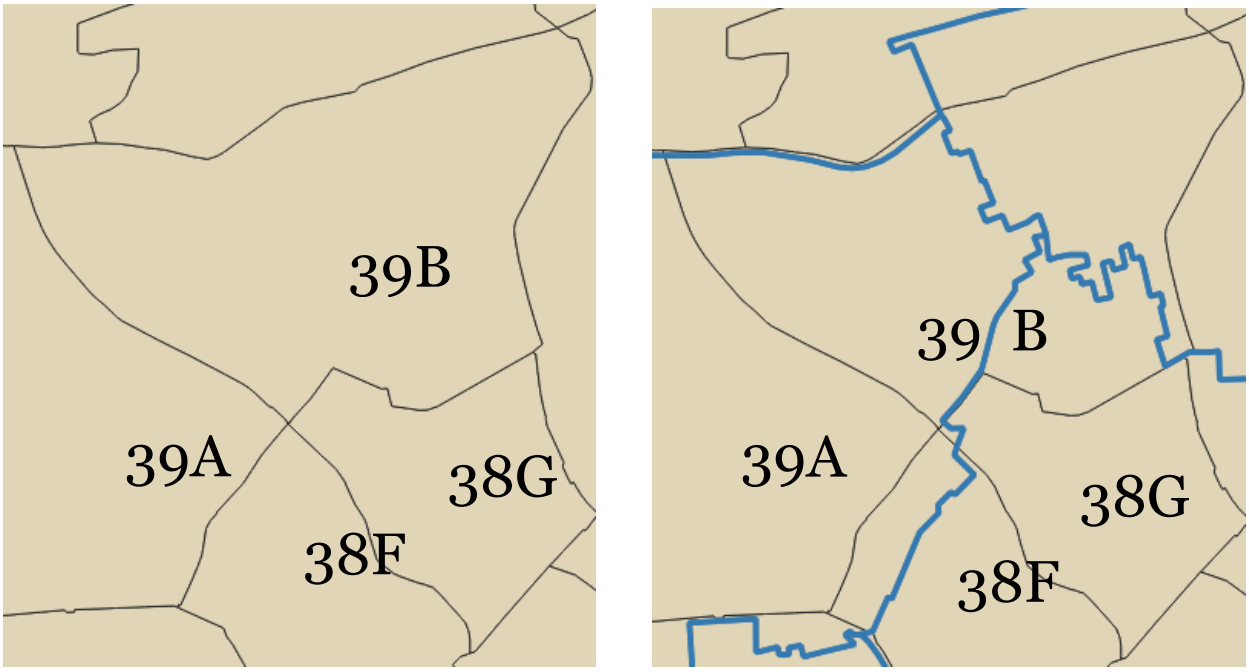

Figure 1: Map of voting districts (black outlines) and map of postal code areas in blue overlaid on top. One voting district may only be composed of (part of) one postal code area (area 38), while one district may be made up of parts of multiple postal code areas (39B).

To solve the matching problem, I use data on building locations to connect the two data sets with each other. For any voting district, the number of dwellings from each postal code area can be accurately calculated from building data. Then, by assigning shares of a postal code areas population to voting districts based on the proportion of dwellings, one can estimate demographic information for each voting district. This approach introduces some measurement error, but it is preferable to, for example, using the surface area share of each postal code area within the voting district to calculate the weights that each postal code area should have.

In addition to producing descriptive results on the connection between unemployment and turnout (section 5), I study this connection using a fixed effects regression model. By controlling for voting district level differences in e.g. household income and education levels, one can more credibly connect changes in election outcomes to changes in employment status. Still, given that individual votes cannot be connected to individuals in the workforce, the results of these regressions should be interpreted as describing neighborhoods and local communities.

4 Empirical results

In this section, I investigate data on Helsinki's voting districts spanning the years 2011 to 2023. Over this time period, Finland saw a total of four parliamentary and three municipal elections. Typically, elections of each type occur every four years, but the election cycle was adjusted in 2016/2017 so that overall election interval is two years. Thus, the municipal governments elected in October of 2012 served for four and a half years instead of the typical four-year term.

Before I examine the relationship between our variables of interest, unemployment and turnout, it is important to illustrate the regional differences in these elements. The voting district level unemployment rate in Helsinki's voting districts in 2021 is shown in figure 2.

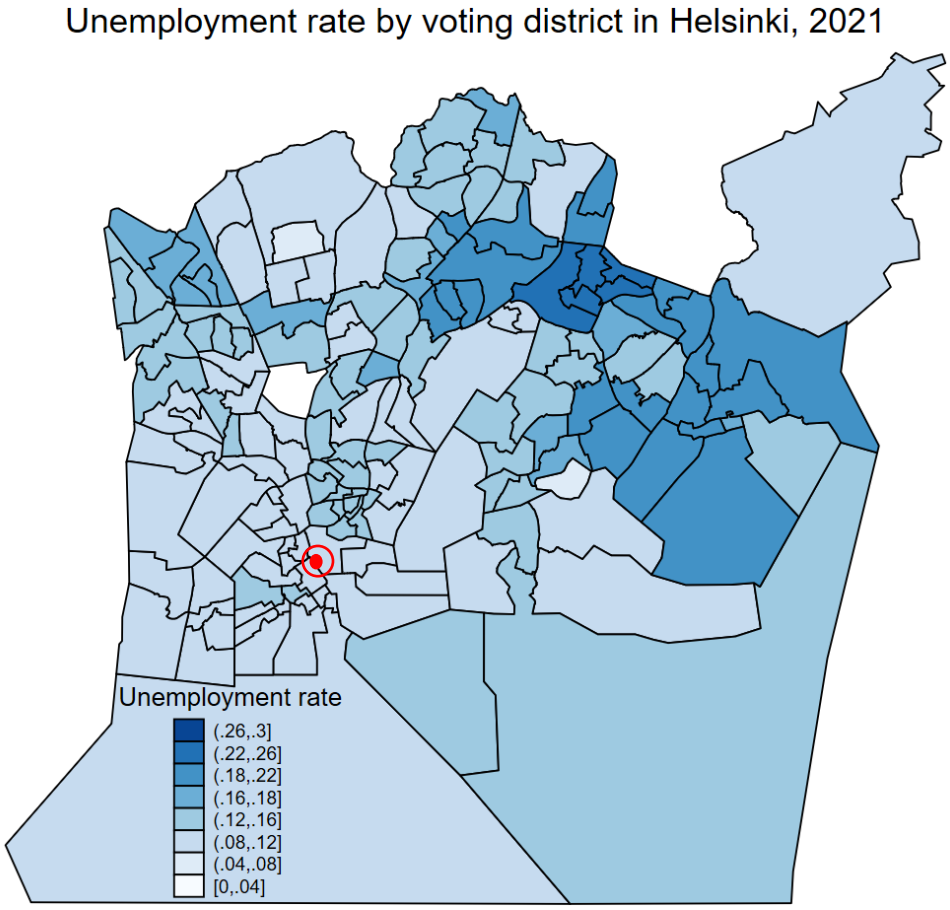

Figure 2: Unemployment by voting district in Helsinki in 2021. The center of Helsinki is shown in red (following the definition of city center in Nöbauer, 2023).

In figure 2, we notice a stark difference in the unemployment rate by voting district, with unemployment rising as high as 26 – 30% in areas in Eastern Helsinki. Unemployment rates are significantly lower in areas near the city center, a finding which is in line with theoretical models on residential sorting in monocentric cities (e.g. Zenou, 2000). Given that unemployment is correlated with lower incomes (figure 3), it is no surprise that unemployed people are more likely to live further away from the city center.

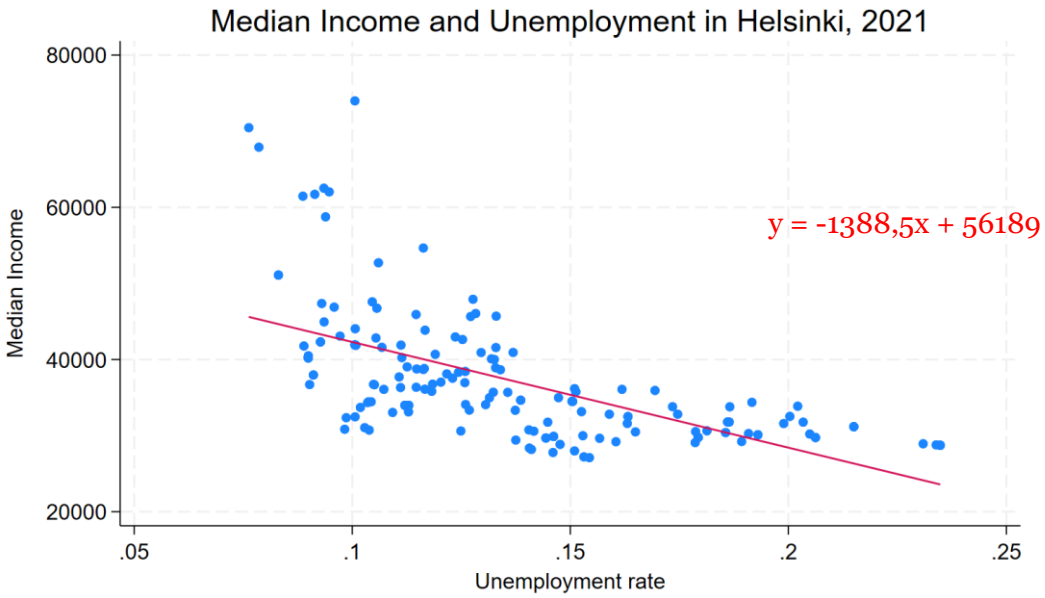

Figure 3: Scatterplot of Helsinki's voting districts in 2021, illustrating the relationship between median income and unemployment.

Since income disparities in Finland are fairly low with a national Gini coefficient of 0.277 (CEIC, 2021) and the welfare state offers protections to disadvantaged citizens, the slope of the fit line is not very steep. Nonetheless, figure 3 helps us connect unemployment and incomes with each other, and by extension connect incomes to voter turnout.

Figure 4 (below) illustrates the connection between our main variables of interest.

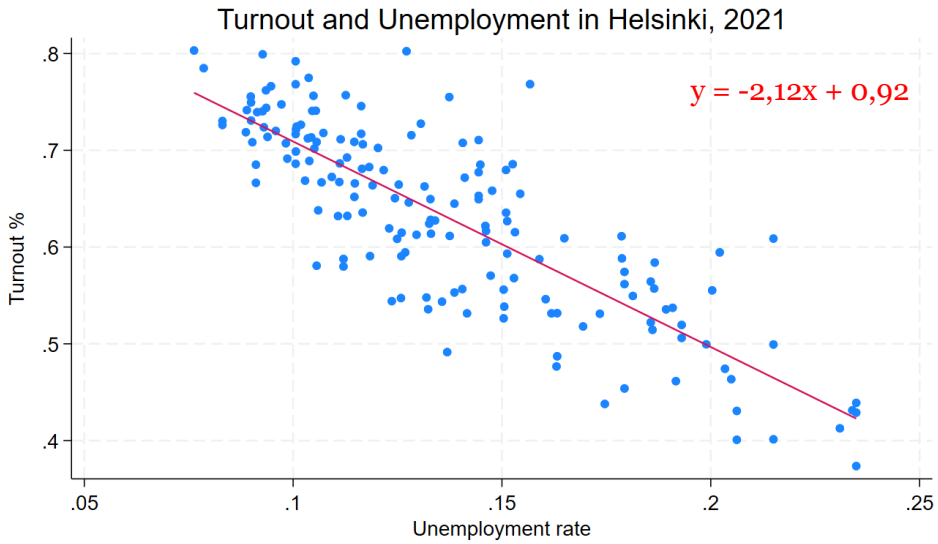

Figure 4: Scatterplot of Helsinki's voting districts, with turnout in the 2021 municipal elections on the y-axis and the district-level unemployment rate on the x-axis. The figure illustrates a clear, negative relationship between the two variables.

The observations in figure 4 are clustered around the regression line, providing strong descriptive evidence in favor of the empirical findings of Upward & Wright (2024) discussed in section 2. Though the data shows that turnout in municipal elections is consistently lower than turnout in parliamentary elections (a common phenomenon across the Western world, e.g. Morlan, 1984 & Stockemer, 2016), areas with higher employment rates vote at a higher rate than areas more affected by unemployment. The geographical differences in turnout are shown in figure 5, and clearly support the concern voiced by Harjunen et al. (2023) that poorer neighborhoods are underrepresented in democratic politics.

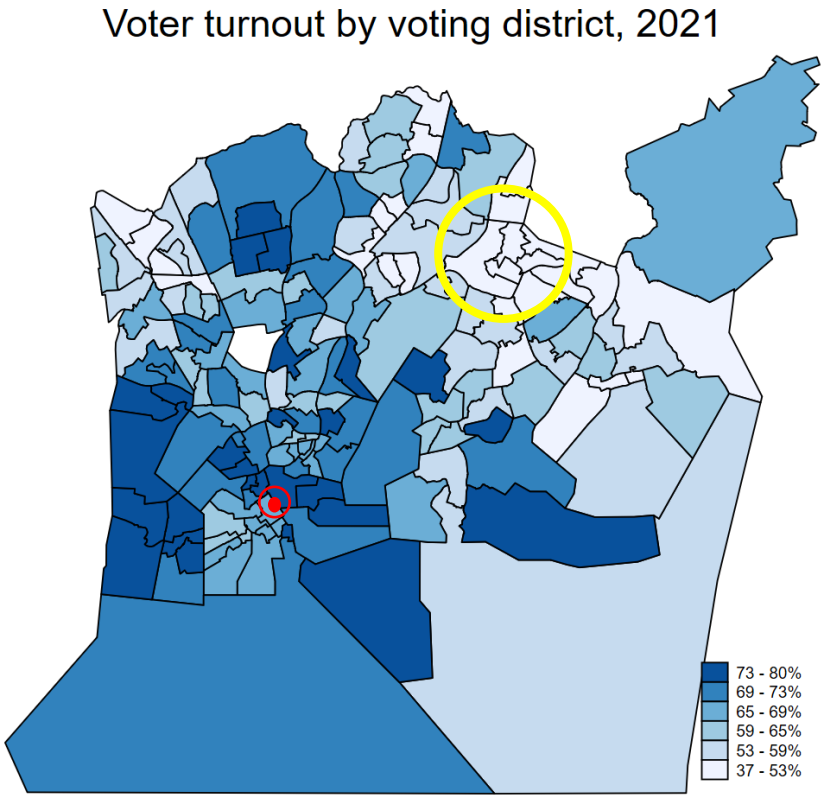

Figure 5: Turnout by voting district in the 2021 municipal election. Dark blue regions such as Munkkiniemi, Lauttasaari, and Töölö have significantly higher turnout rates than areas in East Helsinki such as Kontula (highlighted with the yellow circle).

4.1. Unemployment and turnout in parliamentary elections

Next, I look at the relationship between unemployment and turnout using data from parliamentary elections. We first looked at the municipal election year of 2021, since the differences in turnout complimented findings regarding local representation established in the literature. In this section, I turn to parliamentary elections, since voters may associate national-level decision-making more strongly with employment and the economy.

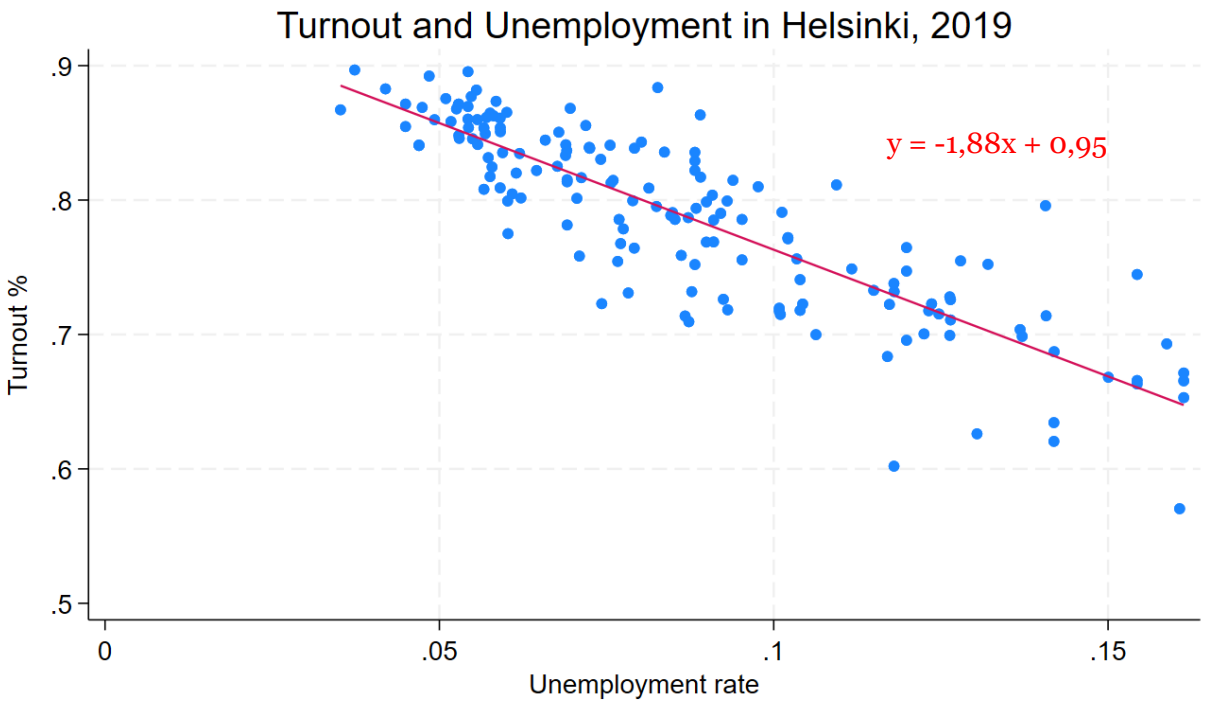

Figure 6: Turnout and unemployment rate by voting district in 2019.

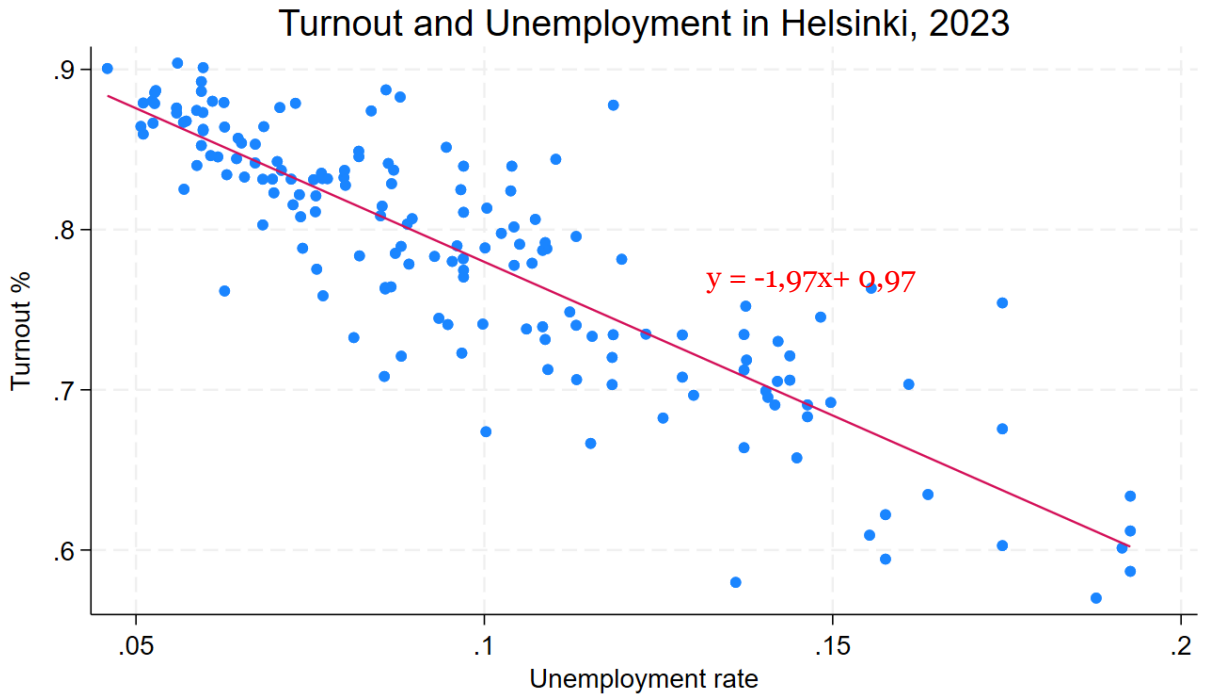

Figure 7: Turnout and unemployment rate by voting district in 2023.

Figures 6 and 7 allow us to draw some conclusions regarding national elections: turnout is consistently higher than in municipal elections, and the lowest levels of turnout are considerably higher than in the 2021 municipal elections. When comparing the two parliamentary elections with each

other, we note that the highest district-level unemployment rate is higher in 2023 than in 2019. Further, we note that the slope of the regression line is steeper in 2023. Though causal estimates cannot be made solely based on these figures (nor this data set), the results suggest that unemployment or its corollaries could influence political participation.

For a causal estimate, one would need to include controls for local level differences, national economic and political trends, as well as election-specific factors such as perceptions regarding e.g. the competitiveness of the election and the weather on election day (Fraga & Hersh, 2010, Persson et al., 2014).

As a whole, the figures discussed in section 5 contribute to previous empirical and descriptive work on differences in turnout based on voter demographics such as employment status and income but provide inconclusive evidence on a potential causal relationship between unemployment spells and reduced political participation.

4.3 Simple regression model

Thus far, we have illustrated the strong correlation between our variables of interest and highlighted strong area-level differences in turnout across Helsinki's voting districts. Now, I explore the data further and run some simple regressions on our data.

I estimate linear OLS regressions of area-level turnout on area-level unemployment. I begin with a simple bivariate model and then gradually introduce year fixed effects, area-level covariates, and finally area fixed effects in a balanced panel framework. This stepwise approach allows us to document the raw association between unemployment and turnout and to assess its robustness to the inclusion of potential confounders and unobserved area heterogeneity. Using a balanced panel of areas observed in all election years ensures that the relationship is identified from within-area changes over time rather than from changes in the composition of areas in the dataset.

4.3.1. Bivariate OLS Regression Model

We start with simple model, regressing unemployment on turnout. The model equation is:

$$\text{Turnout}_{it} = \alpha + \beta \text{Unemployment}_{it} + \varepsilon_{it} \quad (1)$$

Where α is the y-intercept, β the effect of unemployment on turnout, and ε is the error term. The subscripts i and t refer to districts and election years,

respectively. Turnout is calculated as the percentage of eligible voters who cast a vote in the election and the unemployment rate the share of working-age people registered as unemployed at the end of the year out of the total workforce.

Table 1: Unemployment and voter turnout at the voting district level.

	(1)	(2)	(3)	(4)	(5)
	Bivariate OLS	+ Year FE	+ Controls	FE (Unbalanced)	FE (Balanced)
Unemployment rate	–1.763**	–1.945**	–1.619**	–1.045**	–1.039**
	(0.067)	(0.040)	(0.055)	(0.173)	(0.178)
Average income			1.50e–06**	1.12e–06**	1.11e–06**
			(1.79e–07)	(3.45e–07)	(3.44e–07)
Highly-educated (%)			0.000232**	0.000335*	0.000498**
			(0.000032)	(0.000155)	(0.000154)
2012 Election (M)		–0.166**	–0.168**	–0.171**	–0.171**
		(0.005)	(0.005)	(0.002)	(0.002)
2015 Election (P)		0.068**	0.052**	0.031**	0.030**
		(0.004)	(0.005)	(0.007)	(0.007)
2017 Election (M)		–0.052**	–0.070**	–0.091**	–0.092**
		(0.005)	(0.005)	(0.008)	(0.008)
2019 Election (P)		0.044**	0.029**	0.023**	0.020**
		(0.004)	(0.004)	(0.005)	(0.005)
2021 Election (M)		–0.016**	–0.047**	–0.081**	–0.082**
		(0.006)	(0.007)	(0.012)	(0.012)
2023 Election (P)		0.061**	0.036**	0.026**	0.022**
		(0.004)	(0.005)	(0.008)	(0.008)
Year fixed effects	No	Yes	Yes	Yes	Yes
District fixed effects	No	No	No	Yes	Yes
Balanced panel	No	No	No	No	Yes
Observations (N)	1,102	1,102	1,102	1,102	1,043
Districts	–	–	–	165	149
R^2	0.390	0.842	0.854	0.934 (Within)	0.936 (Within)

Notes: The table presents results from regressions where the unit of observation is a voting district. Highly-educated refers to a person with a graduate degree. The reference year for the elections is 2011. Parliamentary and municipal elections are indicated with (P) and (M) respectively. Standard errors are presented in parentheses and are clustered at the voting district level. * $p < 0.05$, ** $p < 0.01$.

The results in column 1 of table 1 clearly support our earlier observations of a connection between unemployment and turnout. A one percentage point increase in the unemployment rate is, on average, associated with a 1.76 - percentage point decrease in turnout. At (hypothetical) zero unemployment,

this model predicts turnout to be roughly 89%. What stands out from the results, in addition to the magnitude of the coefficient on unemployment, is the R^2 of 0.390, which suggests that unemployment alone accounts for nearly 40% of the cross-district variation in turnout.

It is important to note that since I used a bivariate model, all other factors than unemployment that differ across voting districts are stored in the error term. Some of these omitted factors are likely correlated with unemployment and/or turnout, so the results of model 1 serve as a descriptive baseline upon which I will continue to build upon.

4.3.2. OLS Regression with election-year fixed effects

Next, I include year fixed effects to the model:

$$\text{Turnout}_{it} = \alpha + \beta \text{Unemployment}_{it} + \lambda_t + \varepsilon_{it} \quad (2)$$

Where λ_t are election year dummies. Otherwise, the model remains unchanged. The results of this regression are shown in column 2 of table 1.

The results continue to echo our earlier findings but shed some more light on the different factors influencing turnout. While the association between unemployment and turnout remains strongly negative, we notice significant variation between election years. In line with findings from other democracies, the '2nd tier' municipal elections have significant lower turnout compared to our baseline, the 2011 parliamentary election. We also notice significant variation between elections of the same type – turnout in 2015 and 2023 was, on average, much higher than in 2011. Our limited dataset and scope make it impossible to completely pin down the source of variation, but our R^2 of 0.842 suggests that most variation in turnout is between election types rather than districts. This finding is in line with our earlier descriptive analysis – while district-level variation in turnout is strong within elections, virtually all voting districts have significantly lower turnout rates in municipal elections than parliamentary elections.

4.3.3. OLS Regression of Turnout on Unemployment, Income, Education, and Year Fixed Effects

Next, I add controls for income and higher education, since these variables are likely correlated with both voter behavior and employment status. The equation to be estimated is:

$$\text{Turnout}_{it} = \alpha + \beta\text{Unemployment}_{it} + \delta_1 Income_{it} + \delta_2 HigherEducPct_{it} + \sum_{t \neq 2011} \lambda_t \, 1(Year = t) + \varepsilon_{it} \quad (3)$$

Where i and t index voting districts and election years, respectively, α is the y-intercept, β the effect of unemployment on turnout, and ε is the error term. Year-specific differences in turnout are captured by λ_t, and $1(Year = t)$ encompasses the year fixed effects for all elections in our sample (2012-2023), 2011 being the baseline. The results are shown in column 3 of table 1.

The coefficient for the unemployment rate remains strongly negative, so the correlation between unemployment and turnout persists. The slight decrease in magnitude relative to models 1 and 2 suggests some confounding by income and education, but nonetheless the effect remains large. In our data, income is measured in euros, which explains the small absolute value. In context, a 10 000 € higher average income corresponds to a 1,5-2 percentage-point increase in turnout. Findings on year-fixed effects mirror those identified with model 2.

The effect of higher education, i.e. a university/equivalent degree, is less pronounced across our sample – a one-percentage-point increase in the share of highly educated eligible voters only raises turnout by 0.023 percentage points. Since higher education is a lifetime achievement in the sense that is obtained once and retained forever, it is unlikely that the share of highly educated voters changes meaningfully over a short period of time. Incomes, on the other hand, fluctuate more significantly as people enter, exit, and re-enter the workforce. Our data suggests that districts with more highly educated inhabitants systematically participate at a higher rate, which reflects the broader socioeconomic patterns identified in section 2. While a 0.023 percentage point change may be minor at the district level, this effect compounds across districts and municipalities.

4.3.4. District Fixed-Effects Panel Model

Next, I add district fixed effects to the model. This model estimates how within-district changes in unemployment, income, and education over time relate to within-district changes in turnout, while controlling for election-year shocks. The equation for the model is:

$$\text{Turnout}_{it} = \alpha_i + \lambda_t + \beta\text{Unemployment}_{it} + \delta_1 Income_{it} + \delta_2 HigherEducPct_{it} + \varepsilon_{it} \quad (4\ \&\ 5)$$

Where α_i is the district-level fixed effect and λ_t absorbs year fixed effects. All other elements remain the same. The results are shown in column 4 of table 1.

Having added district-fixed effects to our model, the strong negative relationship between unemployment and turnout reduces in magnitude significantly. A one-percentage-point increase in unemployment is associated with a 1.05-percentage-point decrease in turnout. Our fixed-effects model removes all district effects that remain stable over time, such as long-run socioeconomic composition, geographic location, and historical political culture. Thus, a reduction in the main coefficient of interest is expected.

The income effect remains small yet economically significant, mirroring our findings from model 3. Similarly, the impact of higher education remains the same in the context of this model, as does the election type (i.e. year).

The within R^2 -value of 0.934 indicates that our model accounts for a very large share of within-district differences in turnout. Our dataset is fairly limited: the focus on quantitative demographic data allows no way of quantifying the impact of intangible cultural factors, or alternatively local candidates or issues that could boost (or hinder) participation rates. In this regard, our R^2-value is respectably high. Factors that cannot be captured explicitly in this model are reflected in the high rho value of 0.774, which indicates that most of the variance in turnout is the result of time-invariant differences between voting districts. While turnout varies significantly between districts, it changes less significantly within them. In practice, this means that the factors that influence political participation at the voting district level are the persistent results of long-run socioeconomic patterns. When a district reaches a stable point in terms of its demographic make-up, these characteristics may become self-enforcing. It is important to highlight that the high rho value validates the use of a district-level fixed effects model, since the unique, time-invariant characteristics of the districts would bias cross-sectional estimates if not controlled for properly.

4.3.5. Fixed-effects model, balanced panel

I conclude our exploration into the relationship between unemployment and turnout with a balanced panel, using the same model equation as in 4.3.4.

Any districts that are not observed over our entire election sample are omitted. The balanced panel serves as a robustness check for the unbalanced model explored earlier. The results are shown in column 5 of table 1.
Since voting districts remain stable for long periods of time and there are no political incentives to redrawing them, a large portion of voting districts in our balanced panel are retained relative to our unbalanced panel (149 and 165 districts, respectfully). Our results remain largely unchanged from our previous estimations: the relationship between unemployment and turnout remains strongly negative, and income and higher education continue to modestly boost turnout. Our within R^2- and rho-values mirror previous findings, reaffirming the importance of district-fixed effects.

4.3.6. Summary of findings from regression models on turnout

In this subsection, I explored the relationship between turnout and unemployment by using simple bivariate OLS regressions, which was iterated upon gradually. I started with no controls and allowed time-variant and district-level components to influence our variable of interest without constraints. Upon adding controls based on election type and local-level demographics, the coefficient for unemployment rate gradually fell from -1.763 to -1.039 but remained both statistically and economically significant throughout our analysis. While I am both unable to account for all factors which impact turnout nor am I able to link unemployment and political participation at the individual level, our consistent findings, paired with high R^2 and rho values, provide convincing descriptive evidence in favour of an association between unemployment and turnout. Further, since our data and modelling approach exposes our independent variables to measurement error, our findings may even be bogged down by attenuation bias.

While the results of this model show patterns that are consistent with a causal interpretation of our findings, I cannot claim our results to be causal. While some district and year fixed effects can be controlled for, the potential impact of omitted variable bias due to election-specific factors cannot be ignored. While minor, there may be some risk of reverse causality, since politicians tend to favour their own local constituents, and this could impact local employment opportunities. This risk is however unlikely to be meaningful at the voting district level, though it could be a concern at the municipal level if a similar approach were used with a country-wide dataset. Further, this approach does not involve an exogenous shock or 'randomly assigned' unemployment – in our current setup, unemployment is endogenous and its effect on turnout cannot be isolated from other changes and factors.

4.4. Modelling unemployment and party-level support

In this section, I explore the second dimension of voting, namely who the electorate votes for. Until now, the focus has been on turnout, since differences in voting activity between areas may distort representativeness and fuel segregation over the long term. The contents of the votes are interesting for a different reason, since they help us understand how voters assign responsibility for their socioeconomic standing to elected officials. Since the economy is a major political theme, one might expect incumbents to lose popularity during downturns, while opposition parties may be seen as more appealing alternatives.

Similarly to the previous section, I approach this question with a series of OLS regressions, beginning with a simple model and gradually expanding on it by introducing different controls. Our demographic dataset remains unchanged. Our exploration covers multiple dimensions which I already touched upon in the literature review section: I look at incumbent support and party-level support, with a special focus on the right-wing populist party The Finns (Perussuomalaiset or PS) and Helsinki's largest party Kokoomus.

4.4.1. Prime minister party -only regression model

I first focus on how the incumbent prime minister party is impacted by changes in unemployment. Our main variable of interest is the change in the party's relative support at the district level. Since turnout is consistently lower in municipal elections, I do not look at absolute figures. I estimate the following simple model:

$$\Delta Support_{i,PM} = \alpha + \beta Unemployment_i + \varepsilon \quad (6)$$

Where α is the intercept, β the coefficient on unemployment, and ε the error term. The results of this estimation are shown below in column 1 of table 2:

Table 2. OLS regression of support change on unemployment for the incumbent and for The Finns (PS).

	(1)	(2)	(3)	(4)
	PM Party	PM Party	Finns Party (PS)	Finns Party (PS)
	Baseline	+ Controls & FE	Baseline	+ Controls & FE
Unemployment rate	–0.063*	–0.120	–0.175**	–0.076
	(0.030)	(0.097)	(0.034)	(0.080)
Average income		–1.58e–06**		–1.44e–06**
		(3.01e–07)		(3.09e–07)
Highly-educated (%)		0.057**		–0.082**
		(0.013)		(0.014)
2015 Election (P)		0.001		0.063**
		(0.005)		(0.004)
2017 Election (M)		–0.035**		–0.001
		(0.005)		(0.003)
2019 Election (P)		0.007*		0.110**
		(0.003)		(0.004)
2021 Election (M)		0.021**		0.037**
		(0.007)		(0.006)
2023 Election (P)		0.077**		0.074**
		(0.005)		(0.005)
Year fixed effects	No	Yes	No	Yes
District fixed effects	No	Yes	No	Yes
Observations (N)	937	937	937	937
Districts	–	164	–	164
R^2	0.0044	0.803 (Within)	0.028	0.815 (Within)

Notes: The table presents results from regressions where the unit of observation is a voting district. Highly-educated refers to a person with a graduate degree. Parliamentary and municipal elections are indicated with (P) and (M) respectively with 2011 as the reference year. Standard errors are presented in parentheses and are clustered at the voting district level. * $p < 0.05$, ** $p < 0.01$.

Our first model regresses the change in the prime minister (PM) party's support on unemployment. The prime minister party changes multiple times during our sample: Keskusta held the office in 2011, 2017 and 2019, Kokoomus in 2012 and 2015, and SDP in 2021 and 2023.

Our results in column 1 show a modest negative relationship between unemployment and support for the PM party, with a 1-percentage-point increase in unemployment associated with a 0.063 percentage point drop in PM party support. While our p-value is less than 0.05, our confidence interval does not fall completely below 0, so the correlation is not very strong nor statistically convincing. Further, our low R^2-value of 0.0044 indicates that unemployment explains only a tiny fraction of support variation.

I expand on this model by introducing year and district fixed effects, estimating the equation below:

$$\Delta Support_{i,t}^{PM} = \alpha_i + \lambda_t + \beta \text{Unemployment}_{it} + \delta_1 Income_{it} + \delta_2 HigherEducPct_{it} + \varepsilon_{it} \quad (7)$$

Where $\Delta Support_{i,t}^{PM}$ is the change in the Prime Minister party's share of votes, α_i the district fixed effect and λ_t year fixed effect. The results are shown in column 2 of table 2.

Upon introducing our controls, the statistical significance of the coefficient on unemployment vanishes. There is no predictive effect of unemployment on support for the prime minister party. The results for education and income, on the other hand, are statistically significant, but the relationships work in different directions. Based on these results, an increase in income reduces incumbent support, while higher education increases it. This divide makes sense in context, since many parties on both sides of the aisle appeal to highly educated voters. Since the model looks at the prime minister party on a general level instead of at the party level, analysis of these results is not very fruitful.

4.4.2 OLS regressions of Change in support for The Finns on unemployment

One hypothesis that emerged from the literature review is that depressed economic conditions increase support for right-wing populist parties. I test this hypothesis with a simple model:

$$\Delta Support_{i,PS} = \alpha + \beta Unemployment_i + \varepsilon \quad (8)$$

This model is identical to the one used earlier with the PM party, but I now only look at data for the Finns. The results are shown in column 3 of table 2.

Our coefficient on unemployment is negative, suggesting that increased unemployment reduces support for the Finns relative to the previous election. This result contradicts our take-aways in section 2, but it is important to note that since I have not yet introduced year or district-level controls, the impacts of higher unemployment may be felt in areas where The Finns are less likely to gain support. Such districts may be younger and more diverse than the voter base of The Finns.

I now model the relationship between support for the Finns and unemployment with a broader set of controls.

Expanding on the equation as before when looking at the incumbent:

$$\Delta Support_{i,t}^{PS} = \alpha_i + \lambda_t + \beta \text{Unemployment}_{it} + \delta_1 Income_{it} + \delta_2 HigherEducPct_{it} + \varepsilon_{it} \quad (9)$$

The results of our expanded fixed-effects regression using area-level support data for the Finns are shown in column 4 of table 2.

The coefficient for our main variable of interest is slightly negative, but the coefficient is statistically insignificant (p = 0.344). The model is unable to establish a connection between changes in unemployment and support for the Finns. For income and higher education, the model produces statistically significant results that suggest that higher earnings and education reduce support for PS: this finding is in line with the literature explored in section 2. The year coefficients show that the Finns are more popular in national elections than in municipal elections, illustrating national trends in the party's popularity. This result affirms the necessity of year fixed effects.

4.4.4 Party-level regression model

Thus far, I have restricted our analysis to the prime minister party (pooled) and the Finns. Our results showed little statistical significance, and analysis was complicated by the fact that the prime minister party changed multiple times across our sample. Next, I look at each party on their own to see if the results might shed more light on the relationship between our variables of interest.

I move straight to a fixed-effects model, since the more simplistic models are less relevant when looking at support changes than turnout. I estimate the following equation:

$$\Delta Support_{i,t}^{(p)} = \alpha_{i,t}^{(p)} + \lambda_t + \beta^{(p)}\text{Unemployment}_{i,t} + \delta_1^{(p)} Income_{i,t} + \delta_2^{(p)} HigherEducPct_{it} + \varepsilon_{i,t}^{(p)} \quad (10)$$

Where I index our set of parties with p.

The combined results are shown in table 3 below:

Table 3. Unemployment and party support changes with party-level fixed-effects.

Party	**Unemployment rate**
Kokoomus (KOK)	−0.402**
	(0.103)
Finns Party (PS)	−0.076
	(0.080)
Social Democrats (SDP)	−0.130
	(0.101)
Greens (VIHR)	0.404**
	(0.119)
Left Alliance (VAS)	−0.029
	(0.085)
Swedish People's Party (RKP)	0.071*
	(0.038)
Christian Democrats (KD)	0.142**
	(0.025)
Centre Party (KESK)	−0.051
	(0.038)
Observations (N)	937
Districts	164

Notes: The table presents results from regressions where the unit of observation is a voting district. We control for income and education as well as year and district fixed effects. Standard errors are presented in parentheses and are clustered at the voting district level. * $p < 0.05$, ** $p < 0.01$.

Table 3 contains results for the main establishment parties in Helsinki. Liike Nyt is omitted, since the party was only established in 2019 (the movement behind Liike Nyt was founded in 2018). I find that for most parties, unemployment has no statistically significant effect on support, with Kokoomus, Vihreät (The Greens) and the Christian Democrats (KD) being the exceptions. For Kokoomus, increased unemployment has a significantly negative impact on support, which is an expected finding given the party's generally wealthy voter base. For the Greens and KD, increased unemployment increases support relative to the previous election. While the Greens position themselves as a left-liberal party, neither party is strongly associated with employment and the economy. One explanation is that since Helsinki is fairly liberal overall, the potential impacts of unemployment on voting decisions move voters towards the Greens instead of a party like the Finns. In this regard, Helsinki deviates from many other European countries which have seen increased right-wing populist support.

4.4.5 Balanced-Panel FE Regression — Kokoomus

I now look at the results for Kokoomus in more detail using a balanced panel. Since Kokoomus has been the largest party in Helsinki for decades, devoting one regression specifically to the party is justified.

The results of this regression are shown in table 4 below:

Table 4. Unemployment and support for Kokoomus, balanced panel fixed effects model.

	(1)
Unemployment rate	−0.435**
	(0.100)
Average income	5.52e−07
	(6.47e−07)
High education (%)	0.058**
	(0.018)
2015 Election (P)	0.010
	(0.006)
2017 Election (M)	0.043**
	(0.005)
2019 Election (P)	−0.064**
	(0.004)
2021 Election (M)	0.054**
	(0.009)
2023 Election (P)	0.009
	(0.007)
Year fixed effects	Yes
District fixed effects	Yes
Balanced panel	Yes
Observations (N)	894
Districts	149
Within R^2	0.722

Notes: The table presents results from a regression where the unit of observation is a voting district. Highly-educated refers to a person with a graduate degree. Parliamentary and municipal elections are indicated with (P) and (M) respectively with 2011 as the reference year. Standard errors are presented in parentheses and are clustered at the voting district level. * $p < 0.05$, ** $p < 0.01$.

The results of table 4 mirror what has been established earlier – support for Kokoomus and unemployment are negatively correlated. Interestingly, while I find a small, statistically significant connection between higher education and support for Kokoomus, the same does not hold for income. While Kokoomus is generally associated with more wealthy voters, our results do not affirm this belief. The year fixed effects show strong swings in Kokoomus' favour in 2017 and 2021, while 2019 is strongly negative. These values reflect common trends at the municipality level, as well as the overall impact of national election cycles on voting trends in Helsinki.

5 Discussion

In this thesis, I have explored the connection between unemployment and voter turnout by studying both the literature and conducting a descriptive, empirical analysis of the voting districts of Helsinki. The literature establishes a causal relationship between personal unemployment and reduced turnout but does not find a similar relationship at the household level. Further, area-level differences in turnout have been linked to differences in local amenities, suggesting that political participation is one of many factors influencing neighborhood segregation.

Our empirical focus on Helsinki's voting districts revealed meaningful differences between neighborhoods. Using building location data, I combined spatial demographic information with election results to look at the city as granularly as possible with open-source datasets. I first produced simple yet compelling maps and figures on our variables of interest, before moving to a series of regression models on turnout and unemployment. Across all of our models, a consistent negative correlation between unemployment and turnout was found. This finding suggests that economic hardship depresses political participation rather than motivates it. Subsequently, the risk of a feedback loop between reduced representativeness, reduced attention from political authorities, and unemployment exists, and should be explored further.

Our analysis was not limited to turnout, as I also explored how unemployment might impact party-level support. While the models did not produce significant results when looking at the prime minister party or the right-wing populist party the Finns, Kokoomus, Helsinki's most popular party, loses support in more economically distressed districts. These findings are largely in line with Kokoomus' political positioning.

While this thesis produced compelling descriptive results with many of our models and figures, it is important to note the limitations involved with our approach and data. Our main limitation is that neighborhood-level data does not reflect individual behavior, and unemployed individuals cannot be linked to specific votes. In this thesis, I have tried to embrace this limitation, since one can argue that neighborhood health can be reflected in voting trends – even if an individual is employed, if unemployment is rampant in their community, this experience can influence political participation. One limitation which must simply be acknowledged rather than embraced is the risk of endogeneity, as the research setting lacks exogenous variations in unemployment, nor does it cover all unobserved district traits influencing unemployment. The party-level analysis suffered from noisy data, since many

nationally significant parties may only receive a handful of votes at the district level. More broadly speaking, the findings cannot necessarily be generalized to other cities in Finland or Europe. Further, the findings may over- or under-represent national patterns, which may have been the case with our analysis of the popularity of the Finns party.

Despite these limitations, it is prudent to link the descriptive findings to the existing literature. The negative unemployment-turnout relationship aligns with the resource model of political participation (e.g. Blais, 2010), suggesting that citizens give up political participation when their material needs are threatened by economic uncertainty. While some studies also find that grievances have a mobilizing effect (e.g. Kern et al., 2015), the stronger consensus is that this effect does not hold in the long term. Subsequently, there is genuine concern that if unemployment is persistent over time, an individual may recuse themselves entirely from the political sphere. Given the impact of municipal politics on e.g. local amenities, recusal poses a significant risk if it is concentrated in certain areas or among specific demographic groups.

The empirical results of this thesis affirm findings on turnout differences between socioeconomic groups, which have been clearly established in the literature across multiple countries and time periods. My approach does not shed light on the connection between economic hardship and political trust – this dimension could be explored qualitatively by interviewing or surveying Helsinki residents. Such a study would build on our quantitative approach.

While I do not claim causal results, given the strength of our descriptive findings on turnout, it is worthwhile considering policy implications. The stark area-level differences in turnout, particularly in municipal elections, suggest that some areas might benefit from support in forming participatory habits. This support might involve educating citizens on the importance and impact of participation and working to build an atmosphere that encourages voting. Boosting participation is a long-term project, and while specific candidates may be capable of mobilizing voters in one-off elections, such as Barack Obama in 2008 (Osborn et al., 2010), fostering lasting participation requires consistent effort. The city of Helsinki should consider investing into civic engagement initiatives, since more balanced representation could help reduce the recent trend of neighborhood segregation (noted in e.g. Rosengren et al., 2024).

Though the party-level results are less convincing than those on turnout, political parties could use the results of this thesis when formulating their strategies. Kokoomus should be conscious of what unemployment does to their popularity, while parties overall should recognize the untapped potential of

districts with lower turnout rates – the ability to mobilize new voters instead of merely winning them over from other parties provides a competitive advantage.

The research questions explored in this thesis cannot be exhaustively answered using this approach, and several avenues for further research are identified. Studying individual-level data would make causal estimation more realistic, but collection of such a dataset requires both a) considerable resources and b) a long timeframe, since the interactions between economic outcomes and political participation may have long-standing implications. Further, the same set of individuals must be studied over a long period to accurately identify how unemployment interacts with different demographic factors. If an individual-level dataset cannot be collected, expanding on this analysis with data from other cities could allow one to make more generalizable claims on the implications of varying participation rates on neighborhood segregation. The approach in this thesis could also be expanded upon by using measures of neighborhood social capital or a local amenity index.

On a methodological level, this topic could be explored by searching for natural experiments involving significant employment shocks. In Finland, the economic depression experienced in the early 1990s could provide such a setup, but the COVID pandemic could serve as a more recent example in a severely impacted country. Alternatively, the impacts of job loss on participation could be studied by looking at towns where a significant employer has terminated operations. Such 'factory towns' could more accurately capture the potential neighborhood effects of unemployment, since the impacts are likely felt more explicitly at the community level. More broadly, this topic could be expanded upon more broadly by looking at the impacts of different types of unemployment (e.g. youth or long-term) on participation rates.

To conclude, this thesis provides convincing descriptive evidence in favor of existing economic research on how spatial differences in political participation come to exist, and how they might shape communities. The focus on Helsinki serves as a reminder that studies on participation and urban segregation should be localized whenever possible, since results are seldom generalizable across borders or even city lines.

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